

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-79 (Canceled).

Claim 80 (Currently Amended): A method of manipulating digital video data comprising:

accessing digital audio-visual data, representing an audio-visual work and including data for a plurality of video frames;

determining a start position for frame data representing at least two of each of the plurality of frames, wherein said start position of a frame is a location of a first byte of the frame;

generating tag data including data representing the start position and other frame related data for at least two of each of the plurality of frames; and

storing the tag data separate from the digital audio-visual data.

Claim 81 (Previously Presented): The method of claim 80, wherein the tag data includes a time value for each frame.

Claim 82 (Previously Presented): The method of claim 80, wherein the digital audio-visual data further includes non-video data and the tag data includes data referencing the non-video data.

Claim 83 (Previously Presented): The method of claim 80, wherein the other frame related data includes data representing an end position for each frame.

Claim 84 (Previously Presented): The method of claim 80, wherein the digital audio-visual data represents different types of frames and the other frame related data includes data indicating a frame type for each of the video frames.

Claim 85 (Previously Presented): The method of claim 84, wherein the digital audio-visual data is MPEG data.

Claim 86 (Currently Amended): The method of claim 85, wherein the tag data includes, for each video frame (F, G), state data representing a state of one or more state machines.

Claim 87 (Previously Presented): The method of claim 80, wherein the tag data is generated as the audio-visual work is displayed.

Claim 88 (Previously Presented): The method of claim 87, wherein the tag data is saved as a separate file.

Claim 89 (Previously Presented): The method of claim 80, wherein the digital audio-visual data is stored in multiple storages.

Claim 90 (Previously Presented): The method of claim 80, wherein the digital audio-visual data is stored remote from where it is displayed.

Claim 91 (Previously Presented): The method of claim 90, wherein the digital audio-visual data is communicated over a network to the location where it is displayed.

Claim 92 (Withdrawn): The method of claim 80, further comprising:
displaying the audio-visual work from a first position in the digital audio-visual data;
receiving a control signal while displaying;
inspecting the tag data;
determining a target position based on the inspected tag data;
ceasing to perform the audio-visual work from the first position;
accessing the target position in the digital representation of the audio-visual work; and
performing the audio-visual work from the accessed target position.

Claim 93 (Withdrawn): The method of claim 92, wherein the control signal indicates a determinable target position, different from the first position, in the digital data.

Claim 94 (Withdrawn): The method of claim 92, wherein determining the target position includes reading the tag data to determine a start position of a frame for the target.

Claim 95 (Withdrawn): The method of claim 92, wherein determining the target position includes determining a target frame based on the inspected tag data and determining the target position to be a position, within the digital audio-visual data, corresponding to the target frame.

Claim 96 (Withdrawn): The method of claim 92, wherein the control signal indicates a determinable period of time and the target position is determined based on the first position and the determinable period of time.

Claim 97 (Withdrawn): The method of claim 96, wherein inspecting the tag data includes inspecting a time value and determining the target position is based upon the inspected time value and the determinable period of time.

Claim 98 (Withdrawn): The method of claim 92, further comprising communicating prefix data prior to communicating data from the target position.

Claim 99 (Withdrawn): The method of claim 92, wherein the digital audio-visual data represents different types of frames, the other frame related data includes data indicating a frame type for each the video frame and determining the target position is based upon the frame type of the video frames at or near the target position.

Claim 100 (Withdrawn): The method of claim 80, further comprising:
displaying the audio-visual work at a first video-frame display rate;
receiving a control signal, while displaying, indicating that the audio-visual work is to be displayed at a second video-frame display rate different from the first video-frame display rate; and
displaying the audio-visual work at the second video-frame display rate.

Claim 101 (Withdrawn): The method of claim 100, wherein the second video-frame display rate is greater than the first video-frame display rate.

Claim 102 (Withdrawn): The method of claim 101, wherein frames are selected for display at the second video-frame display rate based on video frame types.

Claim 103 (Withdrawn): The method of claim 100, wherein the second video-frame display rate causes the display of the audio-visual data to be in reverse.

Claim 104 (Withdrawn): The method of claim 100, further comprising selecting a selected set of video frames from the audio-visual work based on the second video-frame display rate and sizes of video frame data that correspond to said video frames.

Claim 105 (Withdrawn): The method of claim 104, wherein said selecting the selected set of video frames includes repeatedly performing the steps of:

determining a bit budget; and

determining a size of the frame data that corresponds to a current frame and if the size of the frame data that corresponds to the current frame exceeds said bit budget, then not selecting said current frame as a video frame in said selected set of video frames and if the size of the frame data that corresponds to the current frame does not exceed said bit budget, then selecting said current frame as a video frame in said selected set of video frames.

Claim 106 (Withdrawn): The method of claim 105, wherein the bit budget is based on a first time value associated with a most recently selected video frame, a second time value associated with the current frame, said second presentation rate and a data transfer rate.

Claim 107 (Withdrawn): The method of claim 100, further comprising selecting a selected set of video frames from the audio-visual work based on the second video-frame display rate and on video frame types.

Claim 108 (Withdrawn): The method of claim 107, wherein said sequence of video frame data includes at least one type of video frame data from which said corresponding video frame can be constructed without reference to any other video frame data, and at least one type of video frame data from which said corresponding video frame cannot be constructed without reference to any other video frame data.

Claim 109 (Withdrawn): The method of claim 108, wherein said selecting comprises skipping a frame that requires information that has already been skipped.

Claim 110 (Withdrawn): The method of claim 100, further comprising selecting a selected set of video frames from the audio-visual work and inserting prefix data prior to each selected video frame.

Claim 111 (Previously Presented): The method of claim 80, further comprising:
displaying the audio-visual work in accordance with a set of streaming constraints;
receiving a signal indicating a relaxation of said streaming constraints;
in response to said signal, accessing a set of improved quality information, said improved quality information comprising an improved quality version of at least a subset of the information in said audio-visual work; and
displaying at least a subset of the improved quality information.

Claim 112 (Previously Presented): The method of claim 111, wherein said accessing the set of improved quality information comprises:
determining a first reference point in the audio-visual work;

correlating the first reference point with a second reference point in the set of improved quality information; and
retrieving the subset of the improved quality information based on said second reference point.

Claim 113 (Previously Presented): The method of claim 111, wherein the set of improved quality information comprises a still image.

Claim 114 (Previously Presented): The method of claim 113, wherein the still image takes the form of an image file selected from the group consisting of a JPEG file, a GIF file, a BMP file, a TIFF file, a PIC file, a MAC file and a PCD file.

Claim 115 (Previously Presented): The method of claim 111, wherein the set of improved quality information comprises preprocessed audio-visual information ready to be streamed.

Claim 116 (Previously Presented): The method of claim 111, wherein the signal indicates that information is to be displayed at a slower presentation rate.

Claim 117 (Previously Presented): The method of claim 116, wherein said displaying at least a subset of the set of improved quality information comprises displaying a plurality of still images.

Claim 118 (Previously Presented): The method of claim 116, further comprising sending the subset of the set of improved quality information to a client at an appropriate streaming rate to accommodate the slower presentation rate.

Claim 119 (Previously Presented): The method of claim 111, wherein the signal indicates that information display is to be paused.

Claim 120 (Currently Amended): An audio-visual information delivery system for managing the display of an audio-visual work comprising:

a source of digital audio-visual data representing of an audio-visual work for display, the digital data including frame data representing a plurality of the video frames;

a tag data generator configured to generate ~~for generating, for each video frame,~~ tag data representing a start position and other frame related data for at least two ~~each~~ of the plurality of frames, wherein said start position of a frame is a location of a first byte of the frame; and

a storage for the tag data, separate from the digital audio-visual data source.

Claim 121 (Previously Presented): The system of claim 120, wherein the tag data includes a time value for each frame.

Claim 122 (Previously Presented): The system of claim 120, wherein the digital audio-visual data further includes non-video data and the other tag data includes data referencing the non-video data.

Claim 123 (Previously Presented): The system of claim 122, wherein the other frame related data includes data representing an end position for each frame.

Claim 124 (Currently Amended): The system of claim 122, wherein the digital audio-visual data represents different types of frames and the other frame related data includes data indicating a frame type for each the video frame.

Claim 125 (Previously Presented): The system of claim 124, wherein the digital audio-visual data is MPEG data.

Claim 126 (Currently Amended): The system of claim 125, wherein the tag data includes, for each video frame (~~F~~, G), state data representing a state of one or more state machines.

Claim 127 (Previously Presented): The system of claim 122, wherein the tag data is generated as the audio-visual work is displayed.

Claim 128 (Previously Presented): The system of claim 127, wherein the tag data is saved as a separate file.

Claim 129 (Previously Presented): The system of claim 122, wherein the digital audio-visual data source includes multiple separate storages.

Claim 130 (Previously Presented): The system of claim 122, wherein the digital audio-visual data source includes storage remote from where the audio-visual work is displayed.

Claim 131 (Previously Presented): The system of claim 130, wherein the digital audio-visual data is communicated over a network from the audio-visual storage to the location where it is displayed.

Claim 132 (Withdrawn): The system of claim 120, wherein the system is configured to:

display the audio-visual work from a first position in the digital audio-visual data;
receive a control signal;
inspect the tag data in response to the received signal;
determine the target position based on the inspected tag data;
cease performing the audio-visual work from the first position;
access the target position in the digital representation of the audio-visual work; and
continue performing the audio-visual work from the accessed target position.

Claim 133 (Withdrawn): The system of claim 132, wherein the control signal indicates a determinable target position, different from the first position, in the digital data.

Claim 134 (Withdrawn): The system of claim 132, wherein determining the target position includes reading the tag data to determine a start position of a frame for the target.

Claim 135 (Withdrawn): The system of claim 132, wherein the target position is determined by determining a target frame based on the inspected tag data and determining the target position to be a position, within the digital audio-visual data, corresponding to the target frame.

Claim 136 (Withdrawn): The system of claim 135, wherein the control signal indicates a determinable period of time and the target position is determined based on the first position and the determinable period of time.

Claim 137 (Withdrawn): The system of claim 136, wherein a time value in the tag data is inspected and the target position determined based upon the inspected time value and the determinable period of time.

Claim 138 (Withdrawn): The system of claim 137, wherein prefix data is inserted prior to data from the target position.

Claim 139 (Withdrawn): The system of claim 135, wherein the digital audio-visual data represents different types of frames, the other frame related data includes data indicating a frame type for each of the video frames and the system is configured to determine the target position based upon the frame type of the video frames at or near the target position.

Claim 140 (Withdrawn): The system of claim 120, wherein when the control signal is received when the audio-visual work is being displayed at a first video-frame display rate, the system is configured to cause the display of the audio-visual work at a second video-frame display rate different from the first video-frame display rate.

Claim 141 (Withdrawn): The system of claim 140, wherein the second video-frame display rate is greater than the first video-frame display rate.

Claim 142 (Currently Amended): The system of claim 141, wherein the system selects frames to display at the second video-frame display rate based on video frame types.

Claim 143 (Withdrawn): The system of claim 140, wherein the system causes the display of the audio-visual data to be in reverse.

Claim 144 (Withdrawn): The system of claim 140, wherein a selected set of video frames are selected from the audio-visual work based on the second video-frame display rate and sizes of video frame data that correspond to said video frames.

Claim 145 (Withdrawn): The system of claim 144, wherein the selected set of video frames are selected by the system repeatedly performing the steps of

determining a bit budget; and

determining a size of the frame data that corresponds to a current frame and if the size of the frame data that corresponds to the current frame exceeds said bit budget, then not selecting said current frame as a video frame in said selected set of video frames and if the size of the frame data that corresponds to the current frame does not exceed said bit budget, then selecting said current frame as a video frame in said selected set of video frames.

Claim 146 (Withdrawn): The system of claim 145, wherein the bit budget is based on a first time value associated with a most recently selected video frame, a second time value associated with the current frame, said second presentation rate and a data transfer rate.

Claim 147 (Withdrawn): The system of claim 140, wherein a selected set of video frames are selected from the audio-visual work based on the second video-frame display rate and video frame types.

Claim 148 (Withdrawn): The system of claim 147, wherein said sequence of video frame data includes at least one type of video frame data from which said corresponding video frame can be constructed without reference to any other video frame data, and at least one type of video frame data from which said corresponding video frame cannot be constructed without reference to any other video frame data.

Claim 149 (Currently Amended): The system of claim 148, wherein a frame is skipped that requires information that has already been skipped.

Claim 150 (Currently Amended): The system of claim 140, wherein a selected set of video frames are selected from the audio-visual work and ~~inserts~~ prefix data is inserted prior to each selected video frame.

Claim 151 (Previously Presented): The system of claim 120, wherein the system is configured to:

- display the audio-visual work in accordance with a set of streaming constraints;
- receive a signal indicating a relaxation of said streaming constraints, wherein in response to the signal, the system accesses a set of improved quality information, said improved quality information comprising an improved quality version of at least a subset of the information in said audio-visual work; and
- display at least a subset of the improved quality information.

Claim 152 (Previously Presented): The system of claim 151, wherein the system accesses the set of improved quality information by determining a first reference point in the audio-visual work, correlating the first reference point with a second reference point in the set of improved quality information and retrieving the subset of the improved quality information based on said second reference point.

Claim 153 (Previously Presented): The system of claim 151, wherein the set of improved quality information comprises a still image.

Claim 154 (Previously Presented): The system of claim 153, wherein the still image takes the form of an image file selected from the group consisting of a JPEG file, a GIF file, a BMP file, a TIFF file, a PIC file, a MAC file and a PCD file.

Claim 155 (Previously Presented): The system of claim 151, wherein the set of improved quality information comprises preprocessed audio-visual information ready to be streamed.

Claim 156 (Previously Presented): The system of claim 151, wherein the signal indicates that information is to be displayed at a slower presentation rate.

Claim 157 (Previously Presented): The system of claim 156, wherein at least a subset of the set of improved quality information are displayed by displaying a plurality of still images.

Claim 158 (Previously Presented): The system of claim 156, wherein the subset of the set of improved quality information are sent to a client at an appropriate streaming rate to accommodate the slower presentation rate.

Claim 159 (Previously Presented): The system of claim 151, wherein the signal indicates that information display is to be paused.